

IN THE CLAIMS:

Please amend the claims as follows:

1. (four times amended) A base station array [An] antenna assembly having an operating frequency and a vertical radiation pattern with a main lobe axis defining a downtilt angle with respect to the earth's surface, the antenna assembly comprising:

a plurality of antenna means in first, second, and third antenna groups physically disposed along a backplane, the backplane having a longitudinal axis along which the antenna means are disposed;

differential phase adjustment means electrically connected [disposed] on a path of transmission line means between the first [first [second]] and third antenna groups configured to simultaneously advance a phase angle of a signal to one of said first [first [second]] and third antenna groups and delay the phase angle of said signal to the other of said first [first [second]] and third antenna groups;

such that adjustment of the phase adjustment means results in variation of the vertical radiation pattern downtilt angle between a first fixed position and a second fixed position;

said differential phase adjustment means including coupling means arcuately moveable along an arcuate section of said transmission line means to cause said simultaneous advance of a phase angle of a signal to one of said first and third antenna groups and a delay of the phase angle of said signal to the other of said first and third antenna groups.

24. (four times amended) A base station array [An] antenna assembly having an operating frequency and a vertical radiation pattern with a main lobe axis defining a downtilt angle with respect to the earth's surface, the antenna assembly comprising:

a plurality of antennas in first, second, and third antenna groups physically disposed along a backplane, the backplane having a longitudinal axis along which the antennas are disposed;

a phase adjustment mechanism electrically connected [disposed] between the first [first [second]] and third antenna groups, the phase adjustment mechanism including:

an input coupling element;

a movable coupling section having a pivotally mounted first end electromagnetically coupled to the input coupling element; and

a semicircular, air-substrated transmission line section electromagnetically coupled to a second end of the movable coupling section;

such that pivotal position adjustment of the phase adjustment mechanism results in variation of the vertical radiation pattern downtilt angle between a first fixed position and a second fixed position.

32. (four times amended) A base station array [An] antenna assembly having an operating frequency and a vertical radiation pattern with a main lobe axis defining a downtilt angle with respect to the earth's surface, the antenna assembly comprising:

a plurality of antennas in first, second, and third antenna groups physically disposed along a backplane, the backplane having a longitudinal axis along which the antennas are disposed;

a phase adjustment mechanism electrically connected [disposed] between the first [first [second]] and third antenna groups, the phase adjustment mechanism including:

an input coupling element;

a movable coupling section having a pivotally mounted first end electromagnetically coupled to the input coupling element; and

a semicircular, air-substrated transmission line section electromagnetically coupled to a second end of the movable coupling section;

the phase adjustment mechanism having a range of adjustment including a minimum downtilt position, a mid-point, and a maximum downtilt position;

a drive mechanism coupled to the movable coupling section;

electrical path lengths at the operating frequency, from the input coupling element to each of the antennas, are selected to define a progressive phase shift between each of the antennas such that, with the phase adjustment mechanism set at its mid-point, the vertical radiation pattern

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downtilt angle is approximately 7 degrees;

such that adjustment of the phase adjustment mechanism results in variation of the vertical radiation pattern downtilt angle.